



**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C REQUIREMENT**

**TEST REPORT
FOR
2.4GHz WIRELESS CAMERA**

FCC ID: PA6J000718

MODEL NO: 1415B

PROJECT NO: 00C0300-1

ISSUE DATE: JULY 25, 2000

Prepared for
**HANGZHOU JINLIPU ELECTRICAL CO.
(HANGZHOU TV FACTORY NO. 2)
252 MOGANSAN ROAD
HANGZHOU, ZHEJIANG 310005
P.R.CHINA**

Prepared by
**COMPLIANCE CERTIFICATION SERVICES, INC.
561F MONTEREY ROAD
MORGAN HILL, CA 95037 U.S.A.
TEL: (408) 463-0885
FAX: (408) 463-0888**

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LAB CODE:200065-0

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1. VERIFICATION OF COMPLIANCE

COMPANY NAME : HANGZHOU JINLIPU ELECTRICAL CO.
(HANGZHOU TV FACTORY NO. 2)
252 MOGANSAN ROAD,
HANGZHOU, ZHEJIANG 310006 P.R.CHINA

CONTACT PERSON : SONGTAO HU / SENIOR ENGINEER

TELEPHONE NO : (571) 808-3243

EUT DESCRIPTION : 2.4GHZ WIRELESS CAMERA

MODEL NAME : 1415B

DATE TESTED : JULY 24 & 25, 2000

LIMITS APPLY TO: FCC PART 15 SECTION 15.249	
TECHNICAL LIMITS	TEST RESULT
Radiated Emission of fundamental Frequency	PASSED
Radiated Emission of Harmonic Frequency	PASSED
Radiated Emission Outside the Band	PASSED
LIMITS APPLY TO: FCC PART 15 SECTION 15.209	
Radiated Emission Digital Device	PASSED
LIMITS APPLY TO: FCC PART 15 SECTION 15.207	
AC Line Conducted Emission	PASSED

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in CFR 47 PART 15 SUBPART C. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

RUSS LOWELL / QUALITY ASSURANCE MANAGER
COMPLIANCE CERTIFICATION SERVICES, INC.

Warning : This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

2. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

CHASSIS TYPE	PLASTIC
RF Frequency	CH1 2.413GHz CH2 2.432GHz CH3 2.451GHz CH4 2.470GHz
Antenna Requirement	Permanently Attached
Power Requirement	15Vdc

3. TEST LOCATION

All emissions tests were performed at:

Compliance Consulting Services
561F Monterey Road
Morgan Hill, CA 95037

CCS has site descriptions on file with the FCC for 10 and 3 meter site configurations. CCS is a NVLAP accredited facility.

4. EQUIPMENT MODIFICATIONS

To achieve compliance Levels, the following change(s) were made during compliance testing:

Mod. #1 Replaced the antenna to permanently attached.

5. TEST RESULT SUMMARY

Radiated Emissions

Test Requirement: 15.249(A)(B)

Measurement Equipment Used:

HP Spectrum Analyzer/8566B (Cal Due: 07/01)

HP Spectrum Display/85662A (Cal Due: 07/01)

HP Quasi-Peak Detector/85650A (Cal Due: 07/01)

EMCO DRG Horn (1-18GHz)/3115 (Cal Due: 01/01)

FLEXCO cable/20761: 10ft. coaxial cable (loss: .9dB/ft @ 26GHz)

TEST SETUP FOR MEASUREMENT OF FUNDAMENTAL FREQUENCY

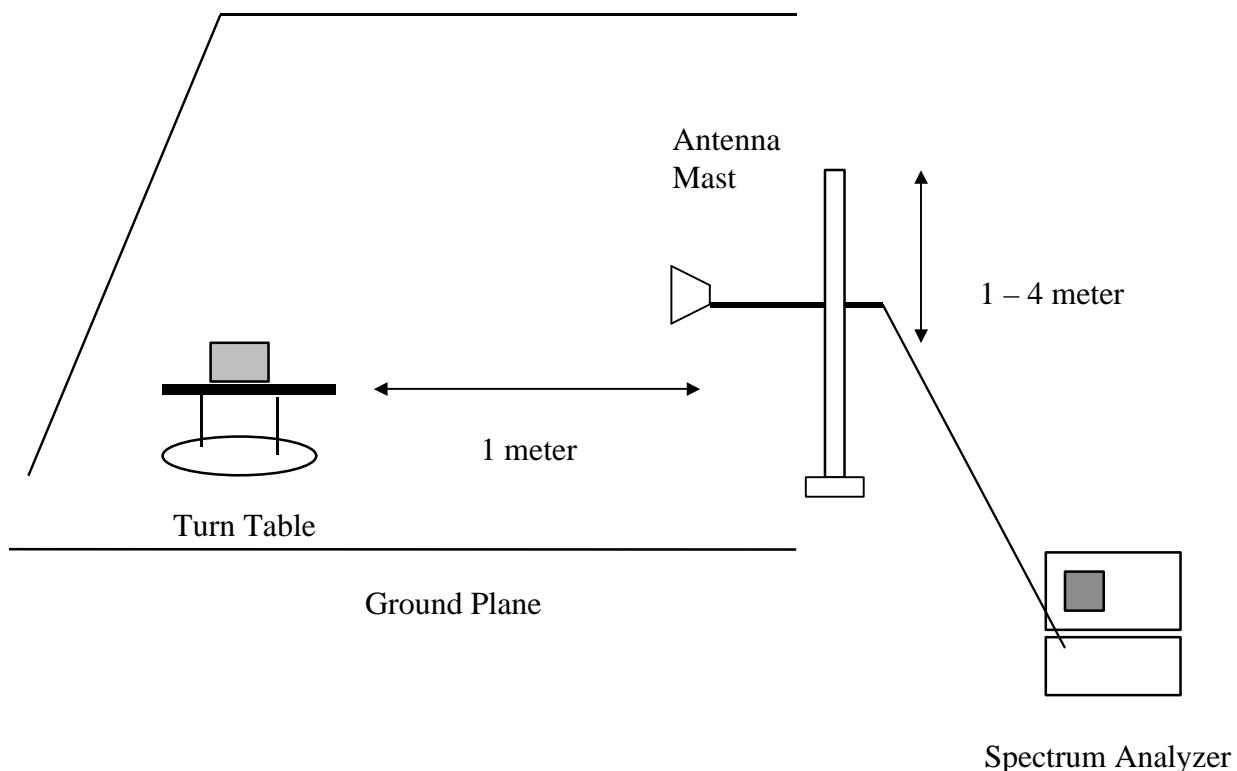


Fig. 1a

Test Procedures

- 1) Place the EUT on the turntable as shown on figure 1a. The EUT was placed as close as possible to the center of the turntable with the axis of rotation going through the EUT antenna when in vertical or horizontal polarization. Activated Eut to transmit.
- 2) The Horn search antenna was place at a distance of 1 meters. The antenna was raised and lowered and the EUT rotated on the turntable to produce maximum emission levels on the spectrum analyzer.
- 3) The EUT was placed standing-up and tested for LOW, MIDUIM, and HIGH channels. Step (1) and (2) were repeated for each orientation.

Test Results:

Please refer to attached spreadsheet.

Radiated Emissions

Test Requirement: 15.249(A)(B)

Measurement Equipment Used:

HP Spectrum Analyzer/8566B (Cal Due: 07/01)
HP Spectrum Display/85662A (Cal Due: 07/01)
HP Quasi-Peak Detector/85650A (Cal Due: 07/01)
MITEQ Pre-Amp (1-26GHz)/NSP2600-44 (Cal Due: 01/01)
EMCO DRG Horn (1-18GHz)/3115 (Cal Due: 01/01)
ARA Horn (18-26GHz)/MWH 1826/B (Cal Due: 07/01)
High Pass Filter FSY(4.585GHz)
FLEXCO cable/20761; 18ft. coaxial cable (loss: .9dB/ft @ 26GHz)

TEST SETUP FOR MEASUREMENT OF FUNDAMENTAL HARMONICS ABOVE 1GHz

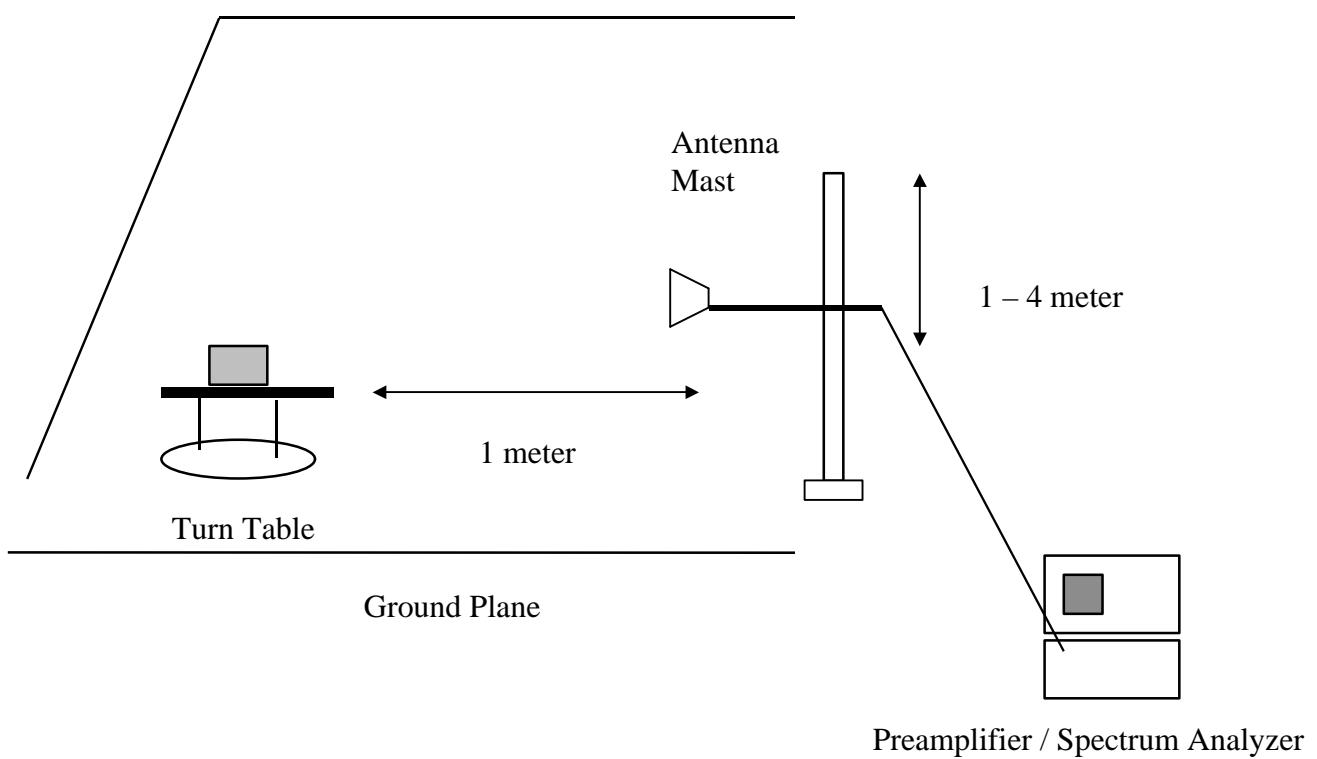


Fig.1b

Test Procedures

1. The EUT was placed on a wooden turntable as shown on figure 1b. The search antenna was placed at 1 meter from the EUT.
2. The turntable was slowly rotated to locate the direction of maximum emission. Once maximum direction was determined, the search antenna was raised and lowered in both vertical and horizontal polarizations.
3. The EUT was placed standing-up and tested for LOW, MEDIUM, and HIGH channels. Step (1) and (2) were repeated for each orientation.

Test result:

Please refer to attached spreadsheets.

Out-of-Band Emissions

Test Requirement: 15.249(C)

Measurement Equipment Used:

HP Spectrum Analyzer/8566B (Cal Due: 07/01)
HP Spectrum Display/85662A (Cal Due: 07/01)
HP Quasi-Peak Detector/85650A (Cal Due: 07/01)
MITEQ Pre-Amp (1-26GHz)/NSP2600-44 (Cal Due: 01/01)
EMCO DRG Horn (1-18GHz)/3115 (Cal Due: 01/01)
ARA Horn (18-26GHz)/MWH 1826/B (Cal Due: 07/01)
High Pass Filter FSY(4.585GHz)
FLEXCO cable/20761; 18ft. coaxial cable (loss: .9dB/ft @ 26GHz)
HP Pre-Amp(P1)/8447D (Cal Due: 10/00)
CHASE Bilog Antenna/CBL6112 (Cal Due: 11/00)

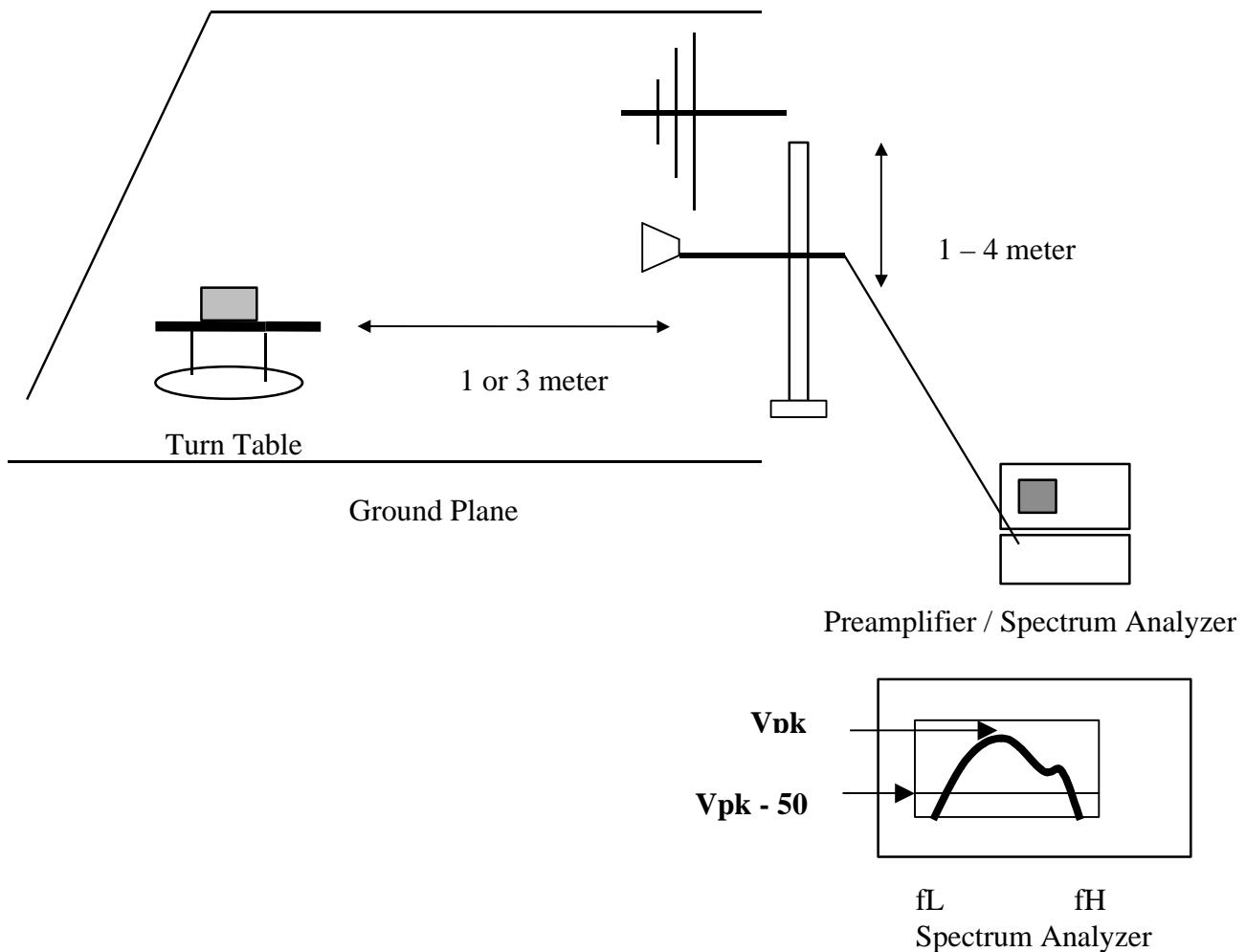


Fig. 1c

Test Procedures

1. The EUT was configured on wooden turntable as shown on figure 1c. The Horn or Bilog search antenna was place at a distance of 1 or 3 meters. The antenna was raised and lowered, the EUT rotated on the turntable, until the EUT azimuth, antenna elevation, and antenna polarity were found which yielded maximum received emission levels on the spectrum analyzer.
2. Spectrum analyzer START and STOP frequencies are set to the limits of the specified frequency band under which the EUT is operating, f_L being the low end of the band, f_H being the high end of the band. The DISPLAY LINE was set 50dB below the maximum peak of the signal. The EUT was set to operate on its lowest frequency.
3. While the transmitter is operating, the analyzer MAX HOLD function was used to capture the envelope of the transmitters occupied bandwidth.

Test Results:

All signals outside 2.4GHz – 2.483.5GHz were at least 50 dB below the fundamental. Refer to attached spectrum analyzer charts.

Radiated Emissions

Test Requirement: 15.209

Measurement Equipment Used:

HP Spectrum Analyzer/8566B (Cal Due: 07/01)
HP Spectrum Display/85662A (Cal Due: 07/01)
HP Quasi-Peak Detector/85650A (Cal Due: 07/01)
HP Pre-Amp(P1)/8447D (Cal Due: 10/00)
CHASE Bilog Antenna/CBL6112 (Cal Due: 11/00)

TEST SETUP FOR MEASUREMENT OF DIGITAL DEVICE

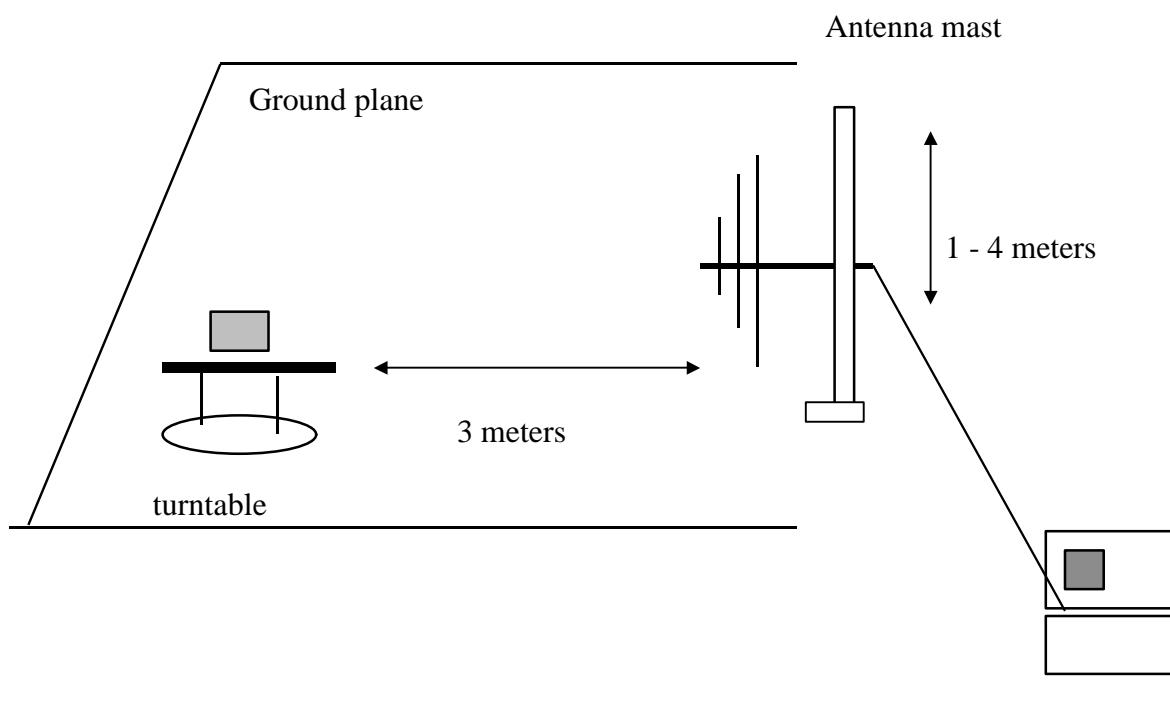


Fig. 2

Test Procedures

- 1) Place the EUT on the turntable as shown. The EUT was placed as close as possible to the center of the turntable with the axis of rotation going through the EUT antenna when in vertical or horizontal polarization. Activated Eut to transmit.
- 2) The Bilog search antenna was place at a distance of 3 meters. The antenna was raised and lowered and the EUT rotated on the turntable to produce maximum emission levels on the spectrum analyzer.
- 3) The EUT was placed standing-up and tested for LOW, MEDIUM, and HIGH channels. Step (1) and (2) were repeated for each orientation.

Test Results:

Please refer to attached data.

AC Line Conducted Emissions

Test Requirement: 15.207

Measurement Equipment Used:

Rhode & Schwarz EMI Receiver ESHS-20 (Cal Due: 2/01)
Fischer Custom Communication LISN, FCC-LISN-50/250-25-2 (Cal Due: 10/00)

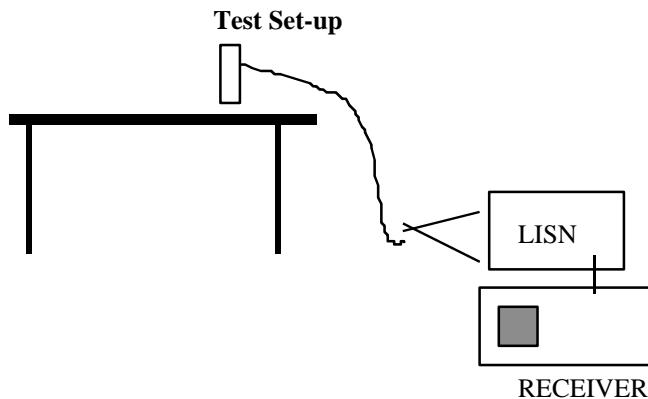


Fig. 3

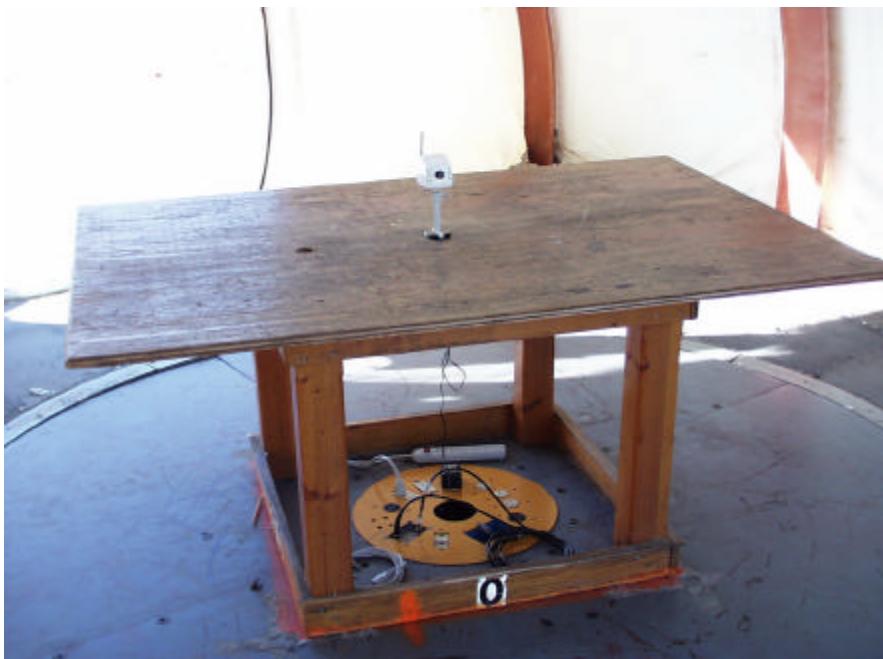
Test Procedure

1. The DC is supplied by a AC adapter. The EUT was placed on a wooden table 40 cm from a vertical ground plane and approximately 80 cm above the horizontal ground plane on the floor. The EUT was set to transmit in a normal tone and charge the battery at the same time.
2. Line conducted data was recorded for both NEUTRAL and HOT lines.

Test Results

Refer to attached graph.

6. EUT SETUP PHOTOS



RADIATED EMISSION SETUP

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HIGH FREQUENCY SETUP



CONDUCTED EMISSION SETUP

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